

## DAILY ARMY RATION.

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JUNE 27, 1898.—Referred to the House Calendar and ordered to be printed.

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Mr. GRIFFIN, from the Committee on Military Affairs, submitted the following

### REPORT.

[To accompany H. R. 10686.]

The Committee on Military Affairs, to whom was referred the bill (H. R. 10686) to increase the daily army ration, having had the same under consideration, would respectfully report thereon as follows:

The committee recommend that the bill be amended by inserting in line 4 of the printed bill, after the word "thereto," the word "tri-weekly;" also by inserting after the word "of," in line 5, the words "full cream;" also by adding at the end of line 5, after the word "cheese," the words "and also two ounces of canned corn," so that the bill when thus amended will read as follows:

That the daily army ration now provided by law shall be increased by the addition thereto triweekly of one-quarter of a pound of full cream American cheese, and also two ounces of canned corn.

The Commissary-General of Subsistence, in a communication addressed on the 17th instant to the honorable Secretary of War, and by that officer transmitted to your committee, expressed his views concerning the advisability of adding cheese to the army ration, as follows:

The mistake was made in the late war of the rebellion of increasing by law the bulk of actual food materials which was to be carried into the field and issued out daily for the subsistence of the soldier in the ranks. This addition largely increased the amount of transportation which was necessary to be provided, and consequently the cost of the Quartermaster's branch of the service was augmented. As a matter of fact this legislative increase of the bulk of food materials to be carried into the field was unnecessary, as was conclusively shown in an inquiry instituted by Hon. Henry Wilson, Chairman of the Senate Committee on Military Affairs, on March 8, 1864. The restoration of the ration to what it was on July 1, 1861, was thereupon directed by law (see sec. 2, act June 20, 1864, 13 Stat. L., 144), and in its essential constituents it remains the same to-day. To forcibly increase the bulk by law to-day would only be to repeat the error of 1861. The article which it is proposed to be added is cheese. This article has been used experimentally in the Army. In 1878 it was made a part of the ration of troops traveling upon cars or transports, or in the field, when it was impracticable to cook rations. The quantity to be issued with each ration was increased in 1879. This travel ration was used principally by recruits traveling to join their companies. From reports received during the three years in

which it was on trial, an opinion was found to exist unfavorable to its continuance. It was accordingly dropped from the supply table as a regular article of the soldier's diet, but it has been, and is now, kept on hand for sale to officers and enlisted men (including the company messes of enlisted men, by whom it can be purchased from company savings when wanted).

The foregoing observations of the Commissary-General were submitted prior to the committee's action on the bill whereby the amendment relating to canned corn was adopted; hence no departmental opinion has been procured concerning that amendment.

Your committee submit that so far as the increase of the bulk of actual food materials proposed by this bill may add to the amount of transportation which may of necessity have to be provided, and the consequent augmentation of the cost of the Quartermaster's branch of the service is concerned, it is of but little moment if the comfort or living of the enlisted men of the Army shall thereby be improved. Whatever may have been the experience during the civil war or the results disclosed by the investigation referred to, it is a well-known and indisputable fact that frequently it was impossible for the Government to furnish to the troops in the field the full ration provided by law. This is especially true as to the variety of different food products constituting the daily ration. The test referred to in the communication during the three years that cheese was issued as a travel ration, having been made principally by the issue of a cheese ration to recruits traveling to join their companies, should be regarded as of but little value, owing to the fact that recruits are usually very deficient with respect to the proper method of caring for themselves or making the best use of the rations issued to them. This knowledge can only be acquired by service and experience in the Army.

The controlling questions with reference to the advisability of adding cheese to the army ration are:

First, as to its nutritive properties when compared with other foods now a part of the army ration; and,

Secondly, as to its comparative bulk.

If upon a proper investigation it shall be made to appear that, for the same or a less quantity in bulk, cheese possesses greater nutritive properties than many other components of the army ration the necessity for adding the same to the ration will be fully established.

The honorable Secretary of Agriculture, in a communication under date of 23d instant, replying to a request submitted to him by a member of your committee concerning the value of cheese as an article of food, gave his views as follows:

A table showing the composition of cheese and various components of the army ration is herewith inclosed. It will be seen that cheese is far ahead of other articles of food in amounts of the two most valuable food ingredients, viz: protein and fat. Compared to fresh beef, it contains two or three times as much protein and fat, and its fuel value, expressed by calories, is about twice as large. One pound of cheese is made from 10 pounds (5 quarts) of milk, and with the exception of milk sugar, which is lost in the whey, it contains practically all the nutritive matter of that quantity of milk. It is a highly concentrated, nutritious food, and, like meat, is rich in protein and should be balanced with carbonaceous foods, such as bread and potatoes.

As to the digestibility and wholesomeness of cheese, would say, if sufficient care is exercised to procure a well made, properly cured article, there should be no trouble on this account. Cheese selected should be firm, rich, of good flavor and keeping quality, and well ripened, as well as in convenient form for transportation. In some parts of Europe cheese of this description is the chief article of diet, being used largely in the place of meat. Statistics of the diet of public institutions show that the per capita consumption of cheese is highest where the dietaries are in charge of physicians, and this is an emphatic testimonial as the value of

cheese as a food from members of the medical profession. Few accurate experiments upon the digestibility of foods have been conducted, but the report of one investigator shows that old cheese required no more time for digestion than did hard boiled or fried eggs, roasted fresh beef, or fresh bread. The milk fat of cheese is more easily digested than beef fat, and the casein of a well-cured cheese is partly broken down in the process of ripening and thus made readily digestible.

The economy of using cheese need not be mentioned further than to say it can now be purchased for 6½ to 7 cents per pound. Other special advantages of cheese as a part in the army ration are in the facts that it requires no special preparation for use, and there is no waste connected with its use.

I believe that good cheese, which can easily be obtained in our markets, would be most acceptable to the soldiers, and its addition to the army ration is recommended.

The following is the comparative table referred to in the honorable Secretary's letter:

*Average composition of cheese and of various components of the army ration.*

	Refuse.	Water.	Protein.	Fat.	Carbohy- drates.	Ash.	Fuel value per pound.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Calories.</i>
Cheddar cheese.....		35.6	28.2	32		4.2	1,875
Beef:							
Fresh, fore quarter.....	19.8	49.3	14.1	16.1		.7	940
Fresh, hind quarter.....	16.3	52	15.3	15.6		.8	945
Fresh, shoulder clod.....	14.6	57.9	16.8	9.7		1	725
Fresh, rump.....	18.5	47.3	14.4	19		.8	1,070
Fresh, flank.....	3.8	54.4	16.7	24.3		.8	1,335
Canned, boiled.....		51.8	24.4	22.5		1.3	1,405
Canned.....	9.4	49.6	14.2	22.8		4	1,225
Dried, salted, and smoked.....		50.8	31.8	6.8	.6	10	890
Canned, dried.....		44.8	38.6	5.4		11.2	950
Mutton:							
Fore quarter.....	21.1	40.6	11.9	25.7		.7	1,305
Leg.....	17.4	52.2	15.1	14.5		.8	895
Ham, smoked.....	12.7	35.9	14.1	33.2		4.1	1,665
Bacon, smoked.....	8.1	17.8	9.6	60.2		4.3	2,720
Bread, white.....		35.4	9.5	1.2	52.8	1.1	1,205
Beans, dried.....		13.2	22.3	1.8	59.1	3.6	1,590
Potatoes, raw.....	15	67.1	1.8	.1	15.3	.7	325
Tomatoes, canned.....		94	1.2	.2	4	.6	105

An analysis of this table shows that cheese, comparatively speaking, contains more nutrition than nearly every other component of the army ration. It surpasses all meats in the army ration, with the exception, perhaps, of smoked bacon.

In view of the fact that both chemical analysis and practical experiments by dietetic experts agree that cheese is a most healthy and nutritious article of food and known to be superior to good beef in its life-giving and strength-sustaining qualities and its well known compact and convenient form for transportation, it is clearly established that it should have preference of many other articles now among the components of the army ration.

No purchase of cheese not having sufficient age should be made for army use. The improvements in cheese-making which have occurred during the past twenty years, since it was last experimented with as an army ration, have been such as to overcome many of the objections which its use then developed. Cheese should not be rejected as an army ration because it involves a new departure. In transacting public business the disposition is too great to follow in a certain line or rut rather than to improve the service by boldly striking out for a more intelligent and beneficial system. There are many exceptions to this unfortunate rule, and hence your committee is of the opinion that cheese should not be discriminated against or the soldier deprived of its

advantages as a part of the army ration solely because it is not now included therein.

An amendment has been recommended providing that the ration of cheese shall only be issued triweekly. As to the addition of canned corn, while it is not as nutritive as cheese, it may nevertheless serve a good purpose as a part of the ration, if issued in accordance with the amendments providing for its addition triweekly to the existing ration.

Your committee is of the opinion that both cheese and canned corn should be added to the army ration, and therefore recommend the adoption of the amendments set forth in this report, and that when so amended the bill do pass.

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